SNOHOMISH COUNTY

DISASTER PREPAREDNESS

Learn How To Get Ready, Respond, Stay Safe

GUIDE 2023















What hazards are near you?

Snohomish County is a beautiful place to call home. Its landscape – from the steep bluffs bordering Puget Sound to the ice-clad flanks of the Glacier Peak volcano – was shaped by powerful natural forces that are active still.

Living here means living with the potential for natural disasters. Among the greatest concerns are earthquakes, severe weather, flooding, wildfire, pandemics and landslides, based on estimated risks to safety and economic damage. Human-caused hazards are also possible, including dam failure, cybersecurity threats and active assailants.

The Snohomish County Hazard Viewer is an interactive mapping tool designed to help people to better understand and to prepare for managing risks.

Information is presented online in a way that makes it easy to identify potential nearby hazards, to learn more about how these risks are likely to be encountered and to act on that information.

The viewer allows address-level searching, making it easy to focus on potential hazards where you live and work, as well as along your commute



Visit the Snohomish County Hazard Viewer: https://snoco.org/hazards

and the many other places life takes you, including schools, stadiums, shopping areas, hiking trails and campgrounds.

The Snohomish County Department of Emergency Management launched the first edition of the hazard viewer in 2019 and recently completed an upgrade. The viewer now incorporates the latest data and

maps being used by federal, state, local and tribal partners to guide response and mitigation efforts. It also incorporates all 13 of the community challenges identified in the 2020 update to the Snohomish County Hazard Mitigation Plan.

Visit the Snohomish County Hazard Viewer to learn about these hazards and more: https://snoco.org/hazards

- ▶ Earthquake risk, including maps showing known fault lines, soils prone to instability during shaking and information on historical damage.
- ▶ Flooding, including the locations of flood plains and more dangerous floodways.
- Wildfire risk areas.
- ▶ Geologic hazards, including potential landslide zones and areas where lahar mudflows could travel during an eruption of the Glacier Peak volcano erupts.
- ▶ Locations at risk of tsunami inundation.



It's time to learn more about managing wildfire risk

The months ahead should bring the deepest study yet of wildfire risk in Snohomish County and identify the best options for keeping people and property safe as the community continues to grow.

Throughout 2024, the Snohomish County Department of Emergency Management expects to comprehensively examine wildfire protection needs, working with residents and landowners plus partners at nonprofits, area fire districts, state and federal agencies and local tribes.



Emergency Management Director Lucia Schmit speaks at a community meeting.

The planning will weigh strategies for reducing brush and other wildfire fuels while also encouraging heightened awareness and resiliency among the people who make their homes amid the trees.

Similar planning efforts have occurred before but were focused solely on communities in the upper reaches of the Stillaguamish and Skykomish valleys, including Darrington, Oso, Verlot, Index and Gold Bar.

The upcoming planning effort will revisit that earlier work and expand the focus to include much of the rest of north and east Snohomish County, from the treed hillsides above tidewater at Warm Beach to the forests and meadows of the west slopes of the Cascade Range. In all, people from 19 different communities here can expect to be engaged through surveys, public meetings and other outreach efforts, according to Amy Lucas, Emergency Management's program manager for planning and resilience.

The wildland fire season here historically has stretched from early July through the rains of fall. Warmer, drier weather in recent years has brought change in fire frequency and intensity.

Autumn 2022 saw multiple large wildfires here, notably the Bolt Creek Fire, which scorched more than 14,700 acres across east King and Snohomish counties. During the fire's six-week run, smoke repeatedly degraded air quality to dangerous levels.

One focus of the new planning effort is accurately mapping the places where brush, trees and homes are intermingled. These wildland urban interface areas present some of the community's greatest wildfire challenges. Firefighting capability in those areas is typically well below what is available to people living inside area cities. There also are limited routes for use during evacuations. When the county last mapped these areas several years ago, they were home to an estimated 130,000 people.

Results will be folded into the county's larger hazard mitigation planning efforts and updated on a five-year cycle. A goal is to produce wildfire protection plan annexes focused on individual communities. A goal is helping first responders better understand:

- Each community's level of preparedness for fire prevention and evacuation.
- The level of support needed to help everyone get out safely during wildfire, regardless of mobility or medical challenges
- Preparations for moving livestock and pets.
- Knowledge of evacuation routes and alternatives.
- · Locations with high historical and community value.
- Insurance coverage among residents.

The work also will include consulting with residents to identify options to better support partners already implementing wildfire risk reduction strategies, such as staging chipping programs. \blacksquare

Are you prepared for a health care emergency?

- ☐ Make sure you get regular check-ups, vaccinations and recommended health screenings.
- ☐ Stay active—even short walks can help better your health.
- ☐ Have a cold/flu kit at home with a thermometer, over-the-counter medications, soup, drinks and comfort items.
- ☐ If you rely on medical equipment powered by electricity, make sure you have a back-up power source.
- Learn the basics of first aid. Keep a kit in your home and car.
- Know the signs of a stroke and heart attack. Consider taking a CPR course.
- Teach kids what to do in the case of a medical emergency.
- Know where to go for a minor illness or injury (urgent care) versus a medical emergency (emergency room).
- Keep a list of household members' medications, allergies and emergency contacts handy for first responders.
- ☐ Create a support system. Check on neighbors in extreme weather (both hot and cold).

For more information on how to keep you and your family healthy, visit our website:

www.snohd.org





When it is time to move, remember Ready, Set, Go!

Evacuation alerts in Snohomish County follow the Ready, Set, Go! model. They may be used during emergencies involving wildfire, flooding, hazardous materials and other threats when it may be critical to get away from danger fast. Here's how they work:

READY

Get ready to leave; it may become necessary. Also known as Level 1, this alert occurs when there is no immediate danger to people or to property but a threat may be headed that way. This is the time for people to scout evacuation routes, to firm up their personal plans for leaving the area, to gather up necessities, to check on neighbors who may need help and to take steps to keep pets and livestock safe. It corresponds to a Level 1 alert elsewhere.

Key steps

- Sign up for SnoCoAlerts if you haven't already.
- Monitor news, weather and other reports.

SET

Get set to leave with little notice. Also known as Level 2, this alert occurs when there is significant risk to an area and a high probability there will be need to evacuate. People should prepare to go at any time. First responders may begin making doorto-door notifications. Those who may take longer, including older people and those living with disabilities, should leave now. It's as time to move livestock.

Key steps

- Make sure you are signed up for SnoCoAlerts and that your information is up to date.
- · Keep your phone on and charged.
- Pack up important papers, pets and prescriptions.
- Assemble your emergency kit, including portable radio and flashlight.

GO!

Also known as Level 3. Evacuate. There is immediate danger. People need to load up their families and pets and leave using pre-designated routes.

Key steps

- Leave now!
- Follow emergency instructions from any first responders you encounter.
- · Drive with your headlights on.
- Once in a safe location, check in with family and friends to let them know your location. ■



Firefighters needed some people to evacuate from their homes during the Bolt Creek blaze. Photo courtesy Bolt Creek Fire Joint Information Center.



Sign up for SnoCoAlerts to stay informed, assist first responders in keeping you safer



SnoCoAlerts is the county's early warning and notification system for delivering urgent emergency information, right to your cellphone.

This robust system is relied upon by emergency managers and other first responders as one of the key tools to keep you informed during a disaster.

Signing up for SnoCoAlerts is quick and easy. Just go to this link to begin: http://snocoalerts.snoco.org.

The system is powered by Smart911. Your zip code and street address are used to tailor alerts for where you live. You can choose which hazards result in alerts. You also can add more alerts or update your contact methods at any time.

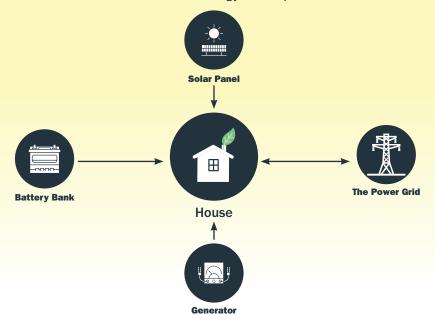
Even if you don't use a cellphone, you still should consider signing up. Through the Smart911 portal, you are given the option of securely providing critical information that can be shared with emergency responders. Among the data to consider providing:

- People living in your household.
- Phone numbers associated with your family.
- Pets, service animals, and livestock.
- Medical conditions and allergies.
- Medications and medical equipment.
- · Property details, layout, and utility information.
- Access to vehicles, their descriptions.
- Your ability, or inability, to evacuate if necessary.
- · Emergency contacts.

All of that information can assist emergency dispatchers in determining how best to get help to you and your family during an emergency. ■

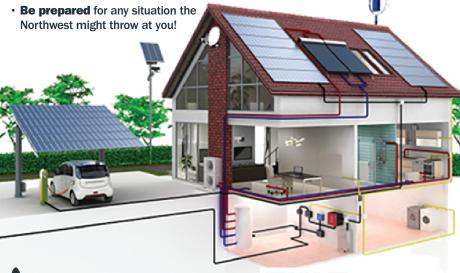
S LAR'TERNATIVE ENERGY SOLUTIONS

"During an outage, be a beacon of light in your neighborhood with a whole home energy back-up solution."



- Zero out your bill by putting excess power back into the grid!
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Power your home with a Solar PV system, store energy with a battery storage system, and stay prepared for an outage with a Generator back up.





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Be there. Volunteer to provide comfort and hope for someone on their worst day.

When an individual or family are displaced by fire, storms or other emergencies, you can provide comfort and support by assisting with access to shelter, clothing, food and comfort.

Turn your compassion into action.

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Public Safety Hub offers real-time disaster information



Visit https://snoco.org/safety to learn more

When disasters happen, there is a place to check first in Snohomish County for the information you need to stay safe.

The Snohomish County Public Safety Hub is a digital space designed for sharing emergency information, including real-time mapping of hazards as they unfold. Find it here: https://snoco.org/safety.

Snohomish County Emergency Management worked with community partners to launch the hub in 2022. Initial sections focused on location of cold weather shelters, cooling centers and advice for minimizing risk when wildfire smoke fills the skies.

The hub is built around geographic information system (GIS) software that makes it possible to swiftly create high-accuracy maps. That can be key when first responders are urging people to shelter in place or evacuate from an area. Because the hub is online, links can be included in wireless emergency alerts sent to phones, or in social media,

providing quick access to additional information that simply can't be conveyed in short messages.

Sections of the hub have been built for use during flooding, hazardous materials events, wildfires and other emergencies. During a disaster, Emergency Management works with partners to share the information people need.

The Bolt Creek Fire last autumn saw hundreds of thousands of visits to the hub by people seeking reliable, up-to-date evacuation guidance. Response personnel updated the site to continuously track the fire's footprint and reflect the latest guidance from firefighters.

Work continues to make the hub an important part of the community's toolkit, including translation of materials into languages other than English. Some content already is available in Spanish, Russian, Ukrainian, Mandarin, Vietnamese, Korean and Tagalog. ■

If the Big One hits, you will be glad to be two weeks ready

A recent analysis shows many roads and bridges in Snohomish County, and elsewhere around Puget Sound, likely will become impassable after a major earthquake due to collapse, fallen debris and stalled or abandoned vehicles.

The broken transportation system could isolate people in what planners are calling population islands. It may be days, weeks - perhaps even longer before repairs are possible and normal travel can resume.

Understanding what could happen in a megaguake is the first step in becoming more resilient during such a disaster.

Snohomish County Emergency Management has created an online tool that makes it easy to learn more: https://snoco.org/megaquake.

Megaguake Population Islands in Snohomish County is an interactive map that allows you to search for addresses and determine the likely boundaries of potential population islands. The map also contains demographic information on people that likely would be on each island, and forecasts potential locations where relief efforts may be staged.

A key takeaway from the analysis is how important it is for people to try to become two weeks ready for disaster. with supplies of food and medicine and options for accessing potable water.

The map was developed as part of a larger regional effort focused on better understanding impacts from the Big One - a magnitude 9.0 megaguake



Visit https://snoco.org/megaquake to learn

along the Cascadia Subduction Zone off the Pacific Northwest coast.

Scientists say the region is overdue for a Cascadia Subduction Zone catastrophe. The fault typically cuts loose every couple of centuries, most recently in 1700. When that next occurs, the ground is expected to shake for up to several minutes. The energy released under the Pacific Ocean almost certainly would spawn tsunami waves, inundating coastal areas, including some low-lying places here.

The population island planning work was begun in 2019 under a Regional Catastrophic Preparedness Grant from the Federal Emergency Management Agency. Snohomish County was chosen to lead the effort, which involved eight central Puget Sound counties, five cities and the Tulalip Tribes. ■

Power Outage Tips

- » Report or view outage info 24/7 at outagemap.snopud.com
- » We regularly update our social media during storms - visit snopud.com/outages for links
- » Not online? Report your outage by phone at 425-783-1001
- » NEVER approach a fallen power line. Stay at least 30 feet away and call 425-783-1001 to report the location. Call 911 if an emergency.



Get other tips at snopud.com/ stormtips





Downed leaf removal | Junk & debris removal | Pruning Tree trimming | Irrigation winterization | And more

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Ground Works Landscaping is a HopeWorks social enterprise, providing job training for those experiencing barriers to employment







When disaster strikes: Prepare, Act, Survive

Free courses in Everett, Marysville, Sultan & Tulalip







Students practice cribbing to lift a simulated collapsed structure, and improvised tools to bust through walls, including just a pencil, at left.

Do you know how to take care of yourself and your loved ones during disasters? Is your family ready?

Snohomish County Emergency Management and partners are working with Texas A&M Engineering Extension Service - TEEX to offer "When Disaster Strikes: Prepare, Act, Survive" classes here in September and November. These free 1.5-day weekend courses prepare people ages 14+ to help themselves, their families and others during disasters.

Learn how to:

- Develop a family preparedness plan.
- Practice self-rescue.
- Conduct light search-and-rescue techniques.
- Better understand recovery and resiliency.

The November course, offered in coordination with the City of Marysville and the Center for Independence, is geared toward students with disabilities or access and functional needs, their families and caregivers.

Learn more and register at the links:

SEPT. 30-OCT. 1, 2023

- Everett: https://bit.ly/4327RQY
- Sultan: https://bit.ly/3JyV3L6
- Tulalip: https://bit.ly/3NRmAda

NOV. 18-19, 2023

► Marysville: https://bit.ly/3PsSQoo





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More than 75,000 people in Snohomish County live and work in places where potentially devastating floods occur. The major river basins – the Snohomish and Stillaguamish – on average flood every three to five years, often at the same time. Big creeks draining through south Everett, Mill Creek, Lynnwood and Bothell also bear watching.

Since 1962, the county has weathered 18 floods large enough to be presidentially declared disasters. The worst arrived during winter 1975, causing \$42 million damage and the deaths of 3,500 head of livestock.

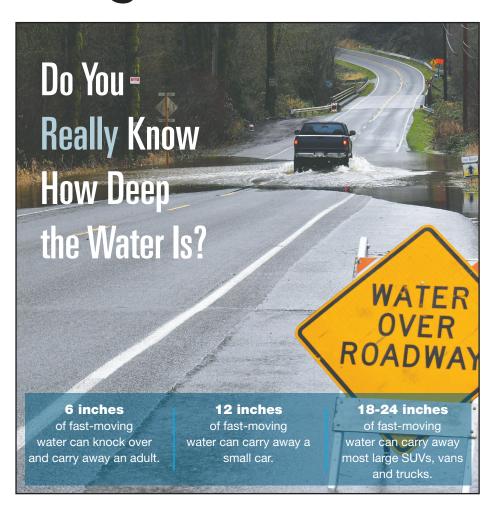
Flood season here typically begins in October and lasts into spring. The threat is greatest between late November and early February. That's when storms heading inland from the Pacific Ocean bring heavy rains and mild temperatures, often melting mountain snows and spurring rivers to jump over their banks.

While heavy downpours can produce flash flooding, particularly in some urban neighborhoods, there usually is some warning that high water is coming. That means there is time to prepare.

The county uses SnoCoAlerts to warn people of emergencies, including flooding. Sign-up now at: http://snocoalerts.snoco.org ■

Other resources:

- ▶ Snohomish County Real Time Flood Information:
- https://snohomish.onerain.com
- Snohomish County Flood Information Center: https://bit.ly/3IWJegx
- Snohomish County Road Closures: https://bit.ly/3aJOUh6





Everyone who lives in Snohomish County gets familiar with severe weather. During winter, high winds, torrential rains, ice and snow can start to feel like unwelcome guests. Experts say the community averages at least one high-wind event annually and calculate a 58% probability of a severe winter storm any given year. Storms not only knock out electricity, they can leave live power lines across roads and topple trees into homes.

For extended power outages, a portable generator or large battery pack can help. The Snohomish County PUD urges against plugging a generator into your home's electrical system unless you've had a transfer switch installed by a licensed electrician. Also, never use a portable generator inside your home or garage. If you purchase a lithium-ion battery pack, make sure it has UL certification.

Be prepared for power outages

- Access PUD's 24/7 outage map to report an outage or learn more about restoration time frames: https:// outagemap.snopud.com/
- The PUD recently launched outage text alerts so customers can receive updated information when they lose power. To receive text alerts, report an outage through the PUD's outage map and opt-in to receive outages texts.
- Check generator for safety. Is exhaust directed away from the home?
- Flashlights are safer than candles.
- Avoid fallen power lines.
- No grills or camp stoves indoors.
- Have a plan, or a backup power source, if you rely on a medical device that uses electricity.
- Food should be safe in your refrigerator up to four hours. After that, discard meat, poultry, fish, eggs and leftovers. ■

Winter Driving Safety: Build An Emergency Car Kit ■ Water in small bottles so it can ■ Energy-boosting snacks thaw quickly Tow strap Road flares or reflective hazard Tire pressure gauge and tire triangles sealant ■ Jacket, winter hat and gloves Battery-operated weather radi ■ Warm blanket or sleeping bag ■ Tire jack and lug wrench Pocket knife or multi-tool Hand warmers Spare mobile phone charger First aid kit Snow shovel and ice scraper Personal medications Sand or kitty litter Tire chains Jump cables or portable Waterproof shoes battery charger Emergency contact list Head lamp or flashlight





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PREPAREDNESS@MARYSVILLEWA.GOV
(360) 363-8000



Emergency preparedness is for everybody

In Snohomish County, preparing for emergencies is everyone's business.

Experience shows us that many people require extra assistance responding to and recovering from disasters. That's frequently related to access and functional needs, temporary or permanent, that may limit their ability to act, according to the Federal Emergency Management Agency (FEMA). Those likely facing the biggest challenges include people who live with disabilities, those who are elderly or very young, who may be limited in their ability to speak or hear English, or who struggle with uncertain transportation and financial resources.

An estimated 35% of the population here lives with a disability or some other type of access and functional need, data suggest. Consider taking these steps now before an emergency, particularly if you or somebody you care about may require additional help:

- Sign up for SnoCo alerts. Not only does this ensure you will receive vital updates during emergencies, you can also opt to provide first responders with information on any access or functional needs you, or others in your household, may have.
- Write out an emergency plan for your household. Practice the plan and share it with close contacts. Consider practicing with those in your trusted social network (family, friends, close co-workers, etc.).
- Think through the details of your everyday life. If there are people who assist and/or interact with you on a daily basis, list who they are and how you will contact them in an emergency.
- Think about the modes of transportation you use and what alternatives exist. If you require handicap-accessible transportation, be sure the alternatives you identify meet your needs. Public transit agencies and

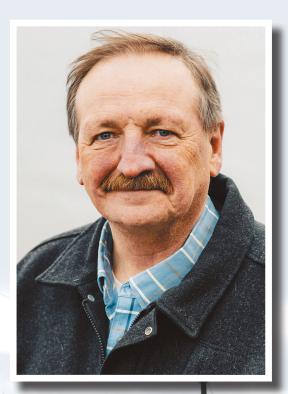
transportation aid organizations, such as the Snohomish County Transportation Coalition (https://www.gosnotrac. org) and the Regional Alliance for Equitable Transportation (https://www. kcmobility.org/raret), maintain good lists of resources and helpful online tools.

- Create an emergency kit to be two weeks prepared. Make sure it includes a two-week supply of medication and any tools or aids you may need. For example, if you have service dogs be sure to have enough food and supplies to support them as well.
- If you are dependent on lifesustaining treatment or equipment, such as a dialysis machine, learn the locations and availability of more than one facility. Communicate with the alternate locations now to determine how best to integrate into your emergency plan.
- Make sure someone in your personal support network has an extra key to your home and knows where you keep your emergency supplies. Teach them how to use any lifesaving equipment or administer medicine in case of an emergency.
- If you use a wheelchair, oxygen or other medical equipment, show friends how to use these devices so they can help you move swiftly if it becomes necessary to evacuate from your home.
- If comfortable, educate your employer and co-workers about any disability you may have and let them know what assistance you may need during an emergency.
- Your family may not be together when disaster strikes. Plan how you will contact one another and review what you will do in different situations.
- Think about how you may be able to assist others during an emergency. We are in it together when things get difficult and our community more resilient when each of us is prepared. ■



Message from the Snohomish County Executive

DAVE SOMERS



Dear Fellow Resident,

If we are prepared, we can survive any natural disaster. We have been hit hard the last few years—wildfires, floods, global pandemics—and we should expect additional challenges in the years ahead. Because of this, we all better understand why emergency preparedness is so critical to our families and community. In addition to the threats listed above, we are also hit with winter storms, landslide risks abound, our local volcanoes will one day erupt, and a major earthquake is still a very real possibility in our lifetimes. But we are not defenseless. We can prepare.

If you need to know how or want to make your family even more resilient, then you have come to the right place. Look no further than these pages and our emergency management website: https://bit.ly/3RvRiIQ.

We hope that nothing bad happens to us or our community. But hope isn't going to make us resilient or help our families survive when disaster does strike, as it will. That's why we have the Department of Emergency Management working day (and night) to ensure we are as prepared as possible. Please do your part, and together we'll make it through whatever comes our way.

INCIDENT RESPONSE

Sincerely,

Dave Somers
Snohomish County Executive